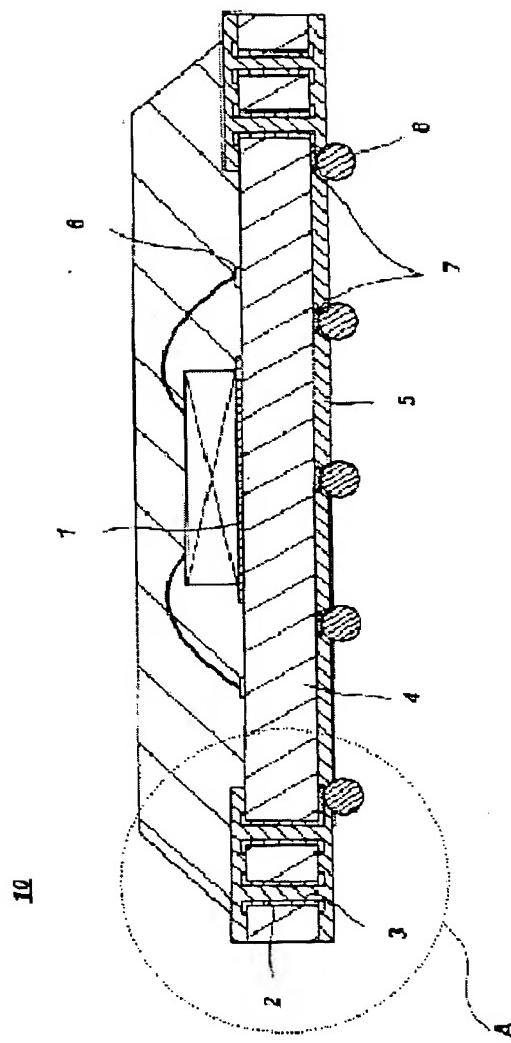


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Fig. 1

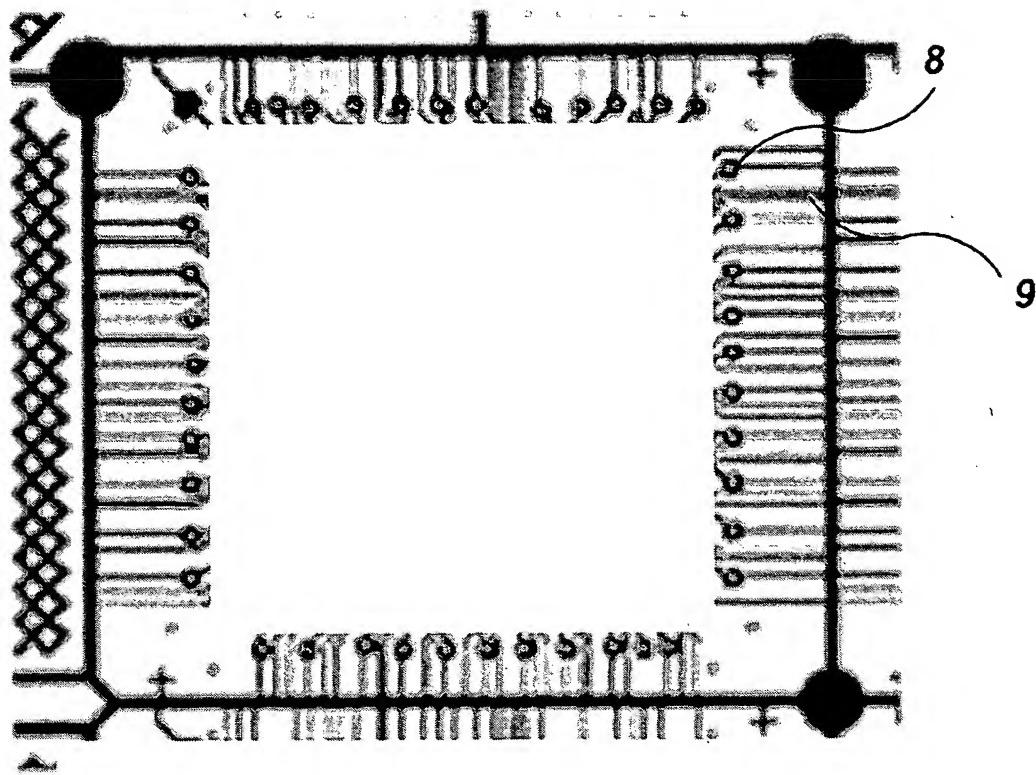
PRIOR ART



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Fig. 2

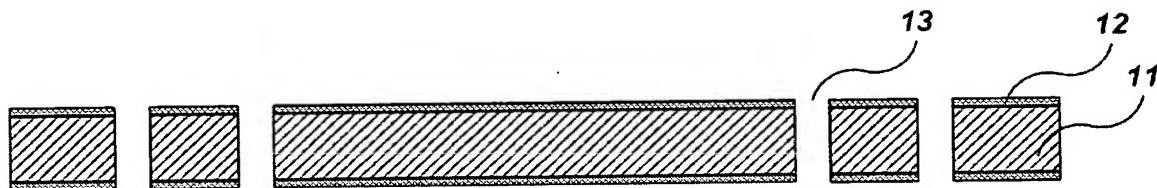
PRIOR ART



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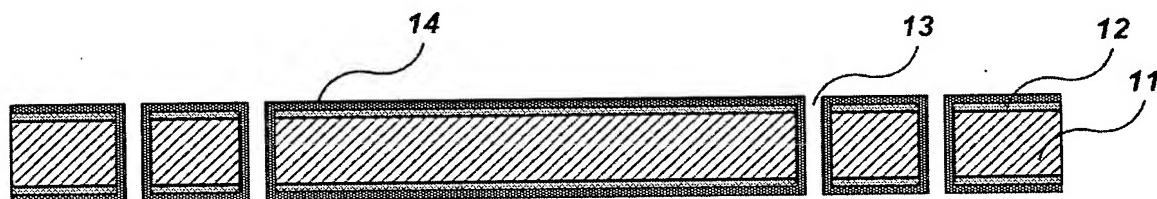
**Fig. 3a**

PRIOR ART



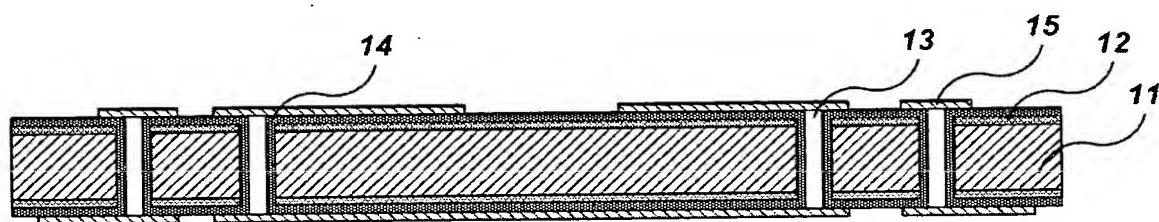
**Fig. 3b**

PRIOR ART



**Fig. 3c**

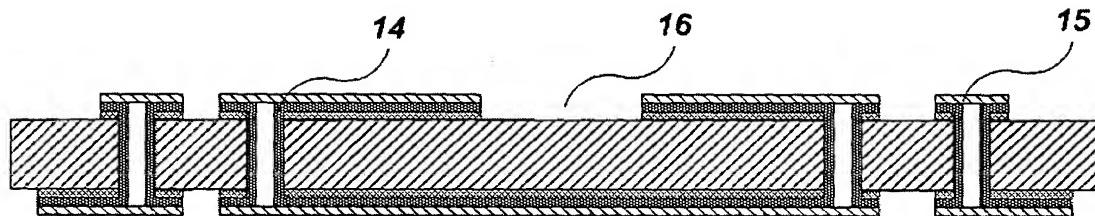
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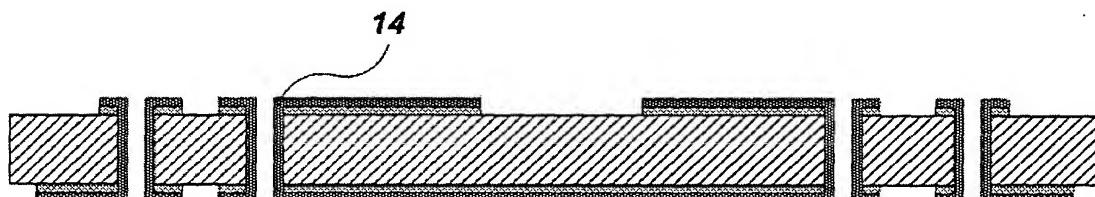
**Fig. 3d**

PRIOR ART



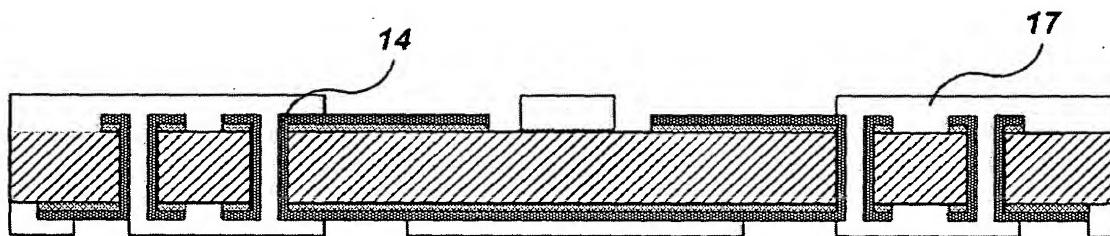
**Fig. 3e**

PRIOR ART



**Fig. 3f**

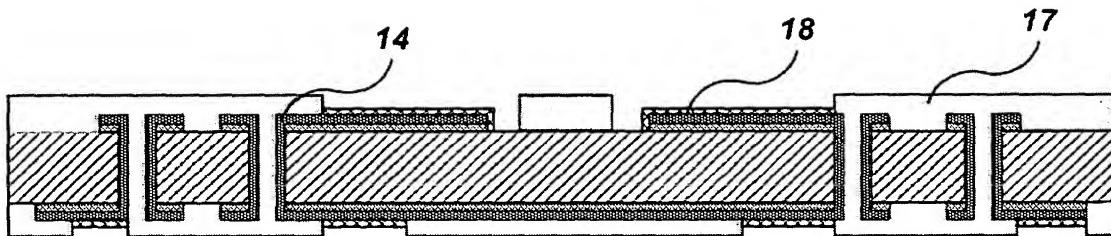
PRIOR ART



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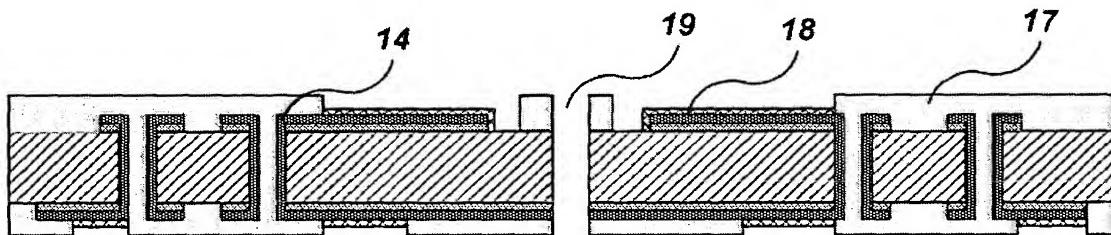
**Fig. 3g**

**PRIOR ART**



**Fig. 3h**

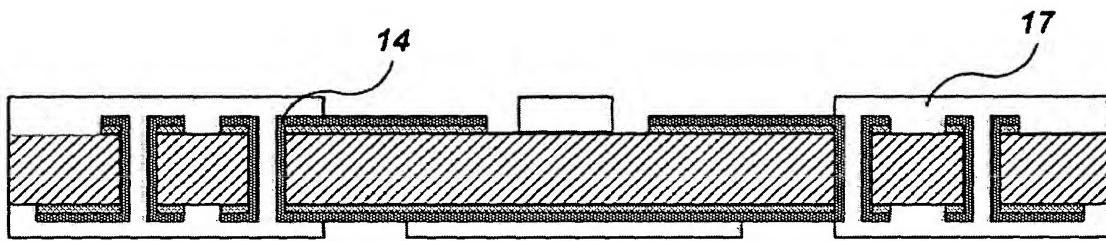
**PRIOR ART**



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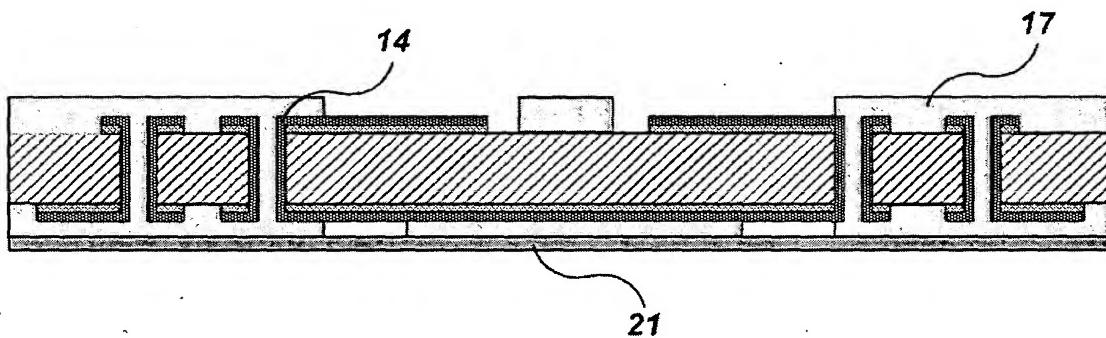
**Fig. 4a**

PRIOR ART



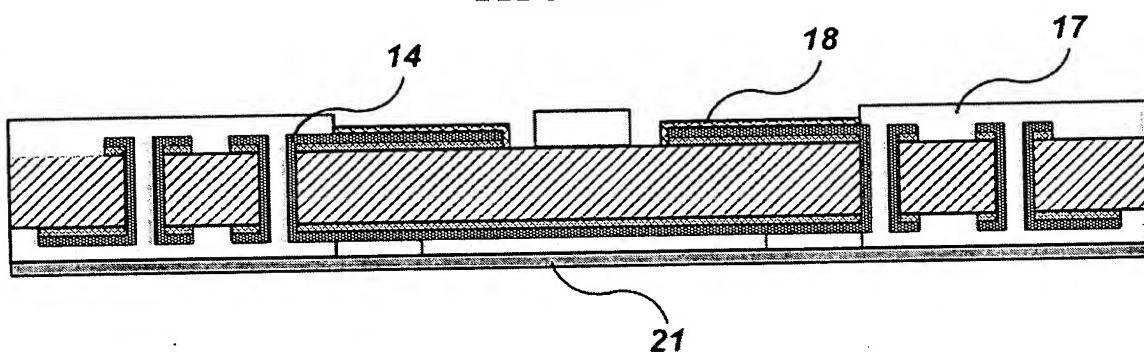
**Fig. 4b**

PRIOR ART

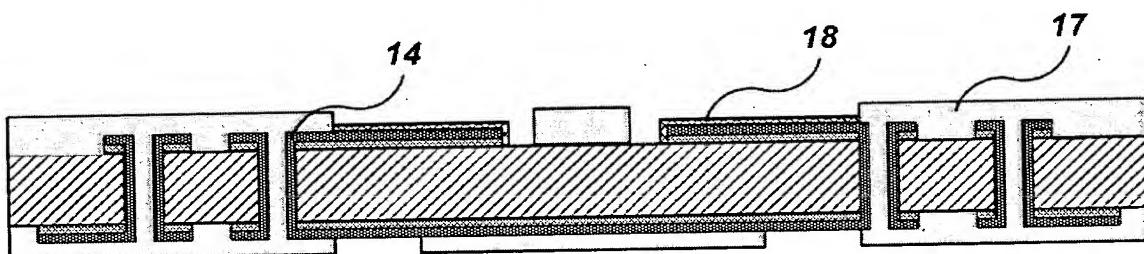


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**Fig. 4c**  
PRIOR ART



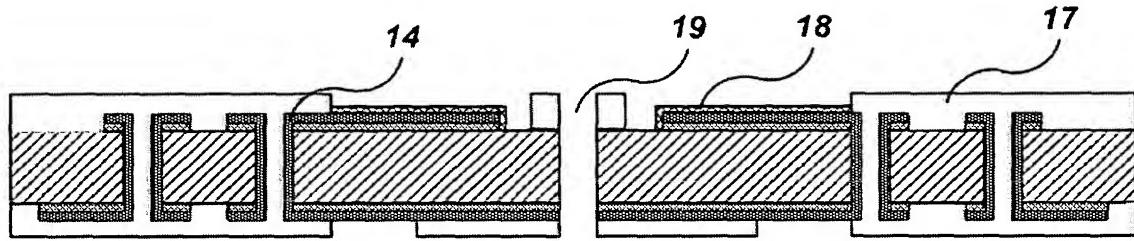
**Fig. 4d**  
PRIOR ART



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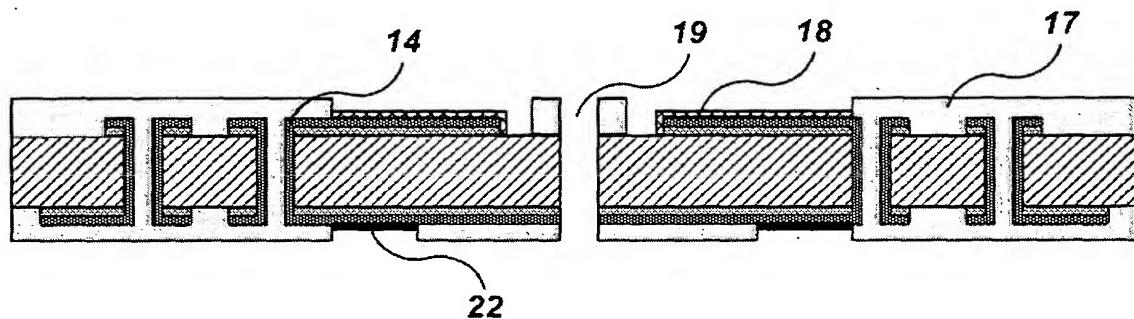
**Fig. 4e**

PRIOR ART



**Fig. 4f**

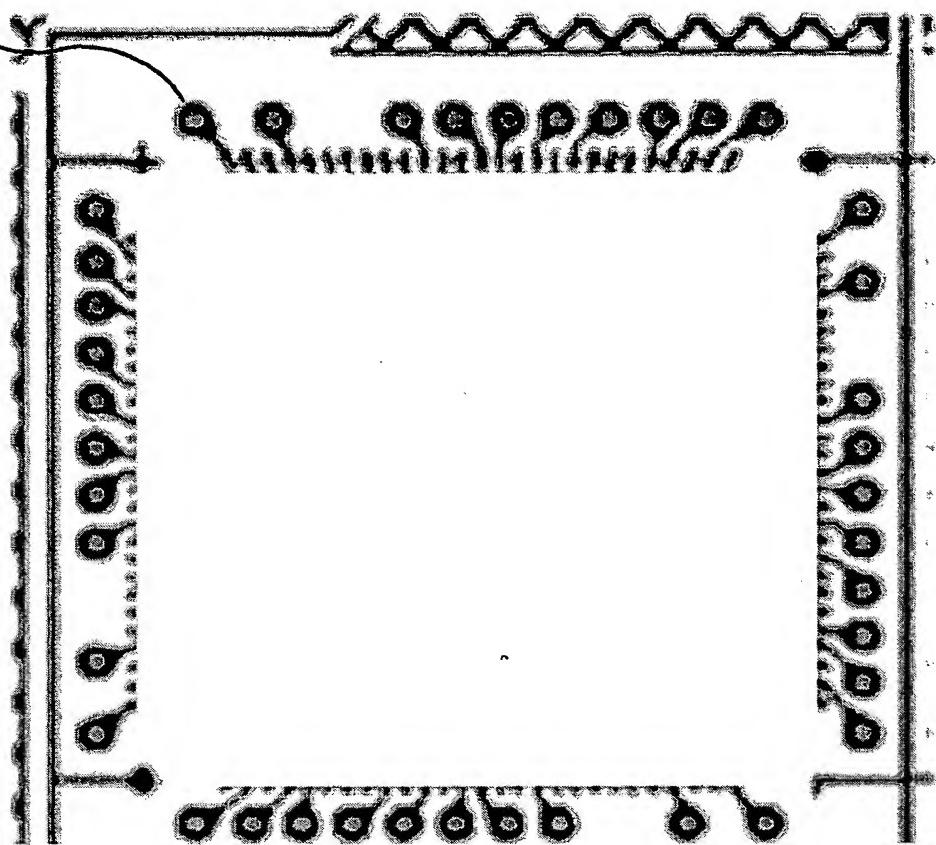
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Fig. 5

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Fig. 6a

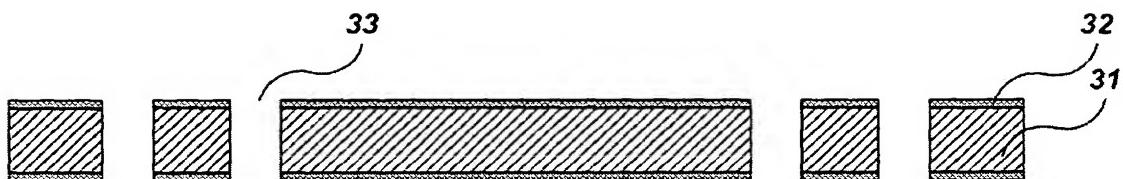


Fig. 6b

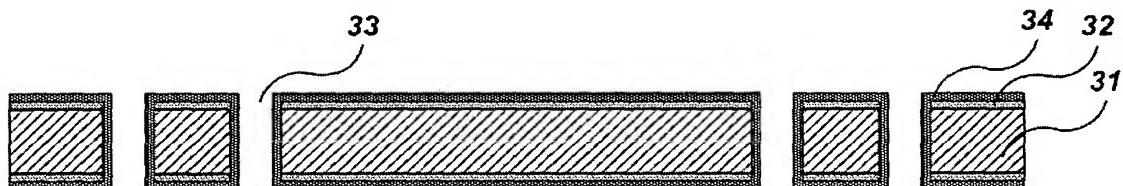
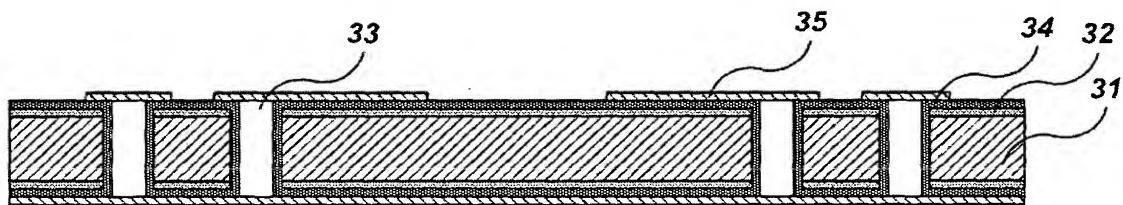


Fig. 6c



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Fig. 6d

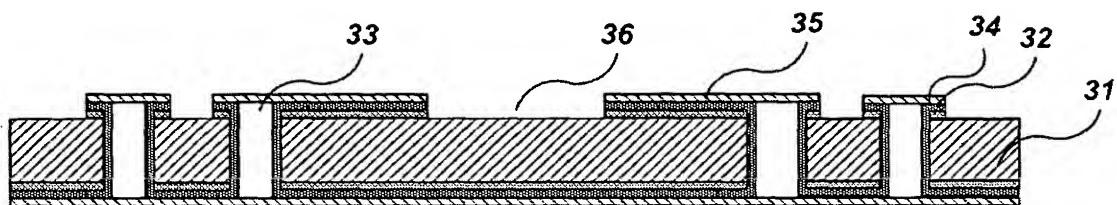


Fig. 6e

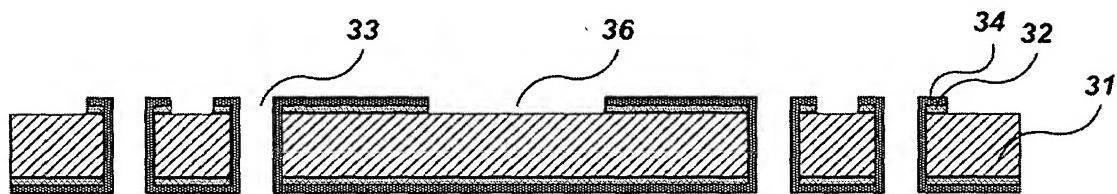
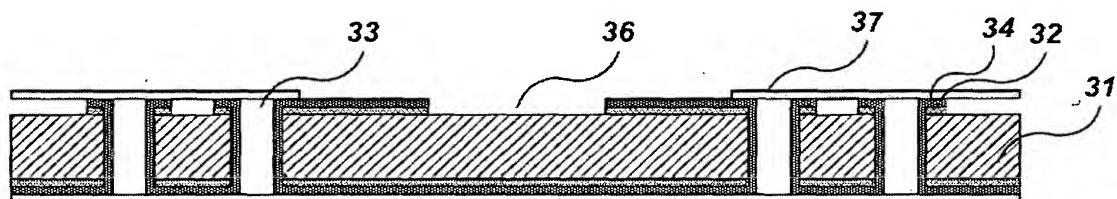


Fig. 6f



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Fig. 6g

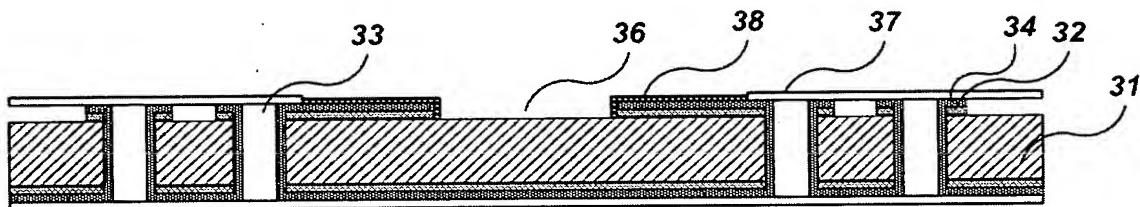


Fig. 6h

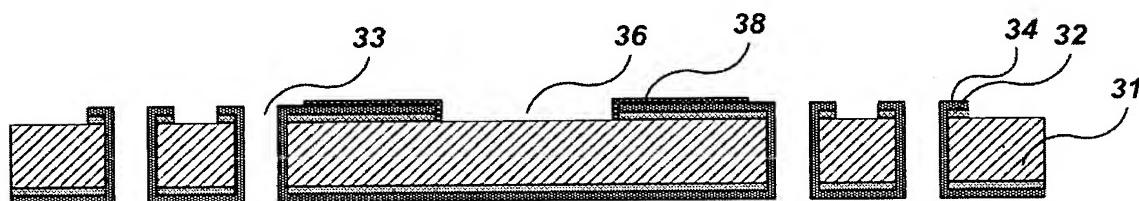
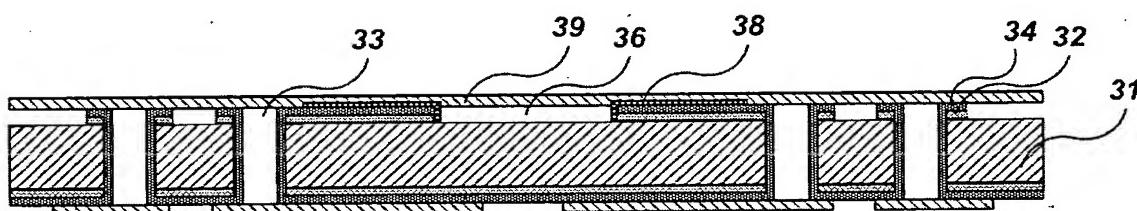


Fig. 6i



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Fig. 6j

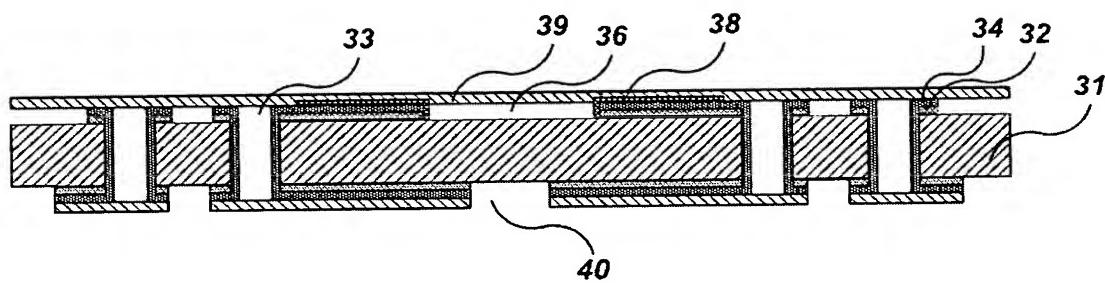
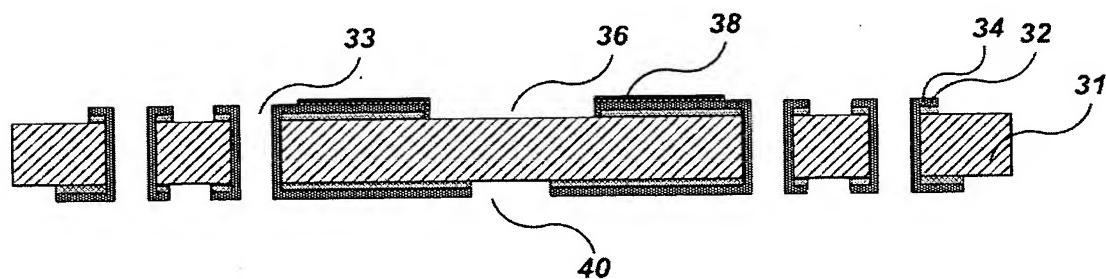


Fig. 6k



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Fig. 6l

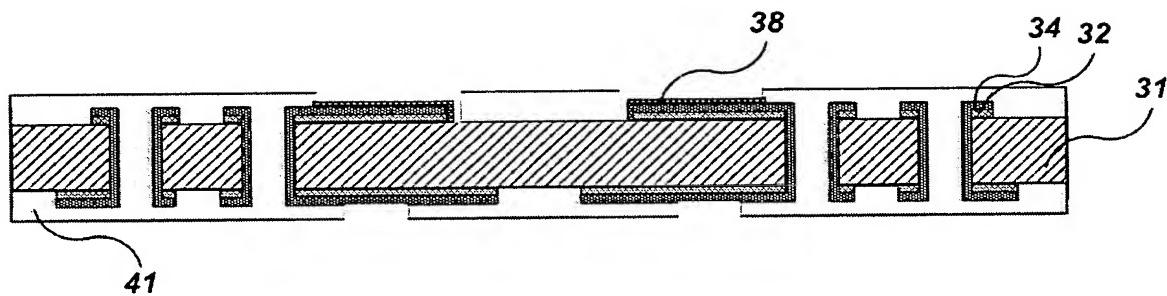
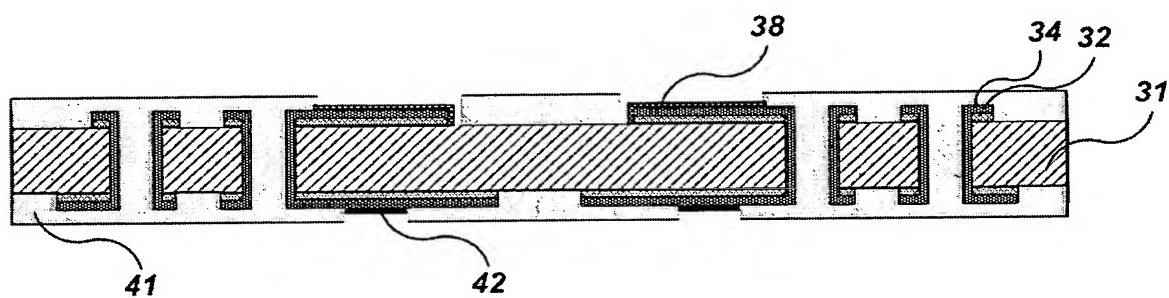


Fig. 6m



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Fig. 7a

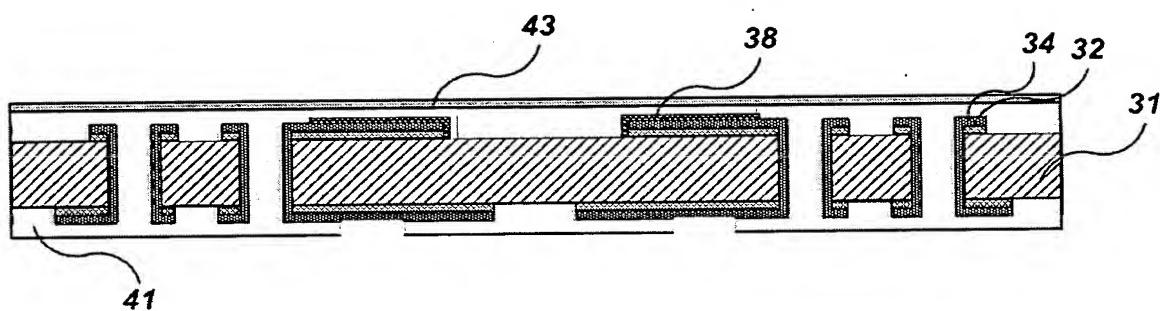
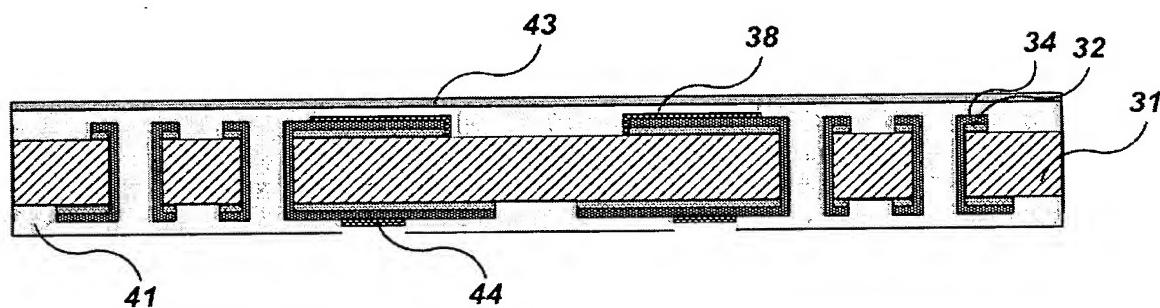


Fig. 7b



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Fig. 7c

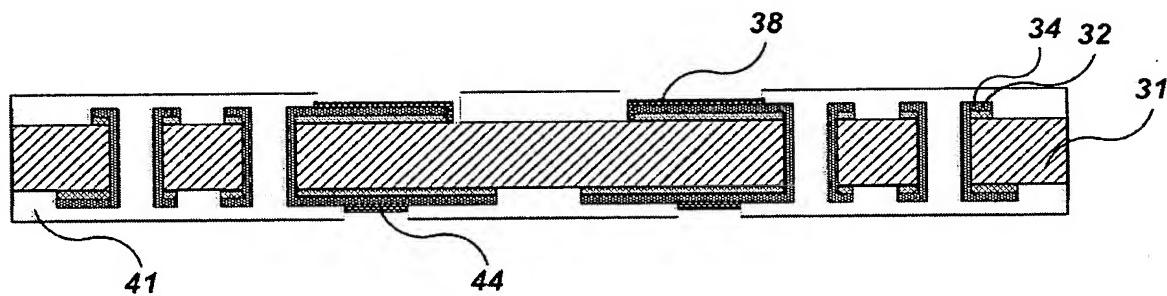


Fig. 8a

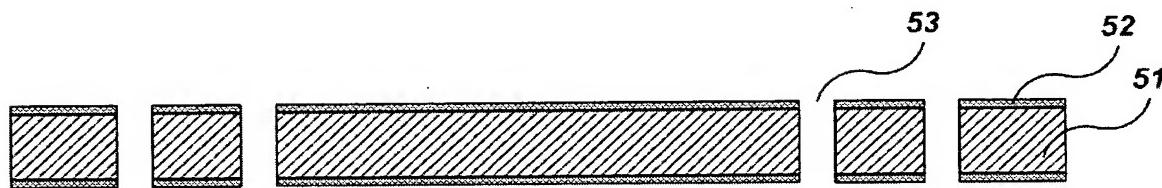
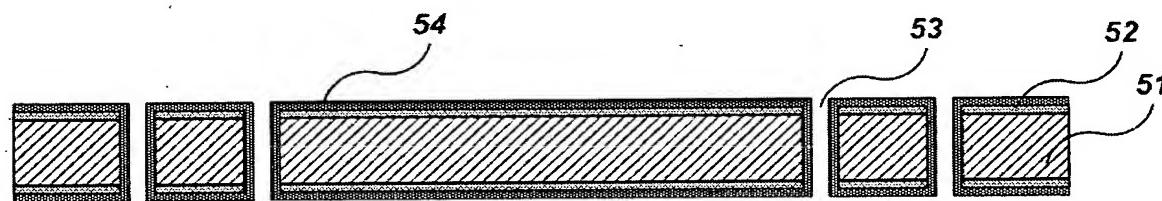


Fig. 8b



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Fig. 8c

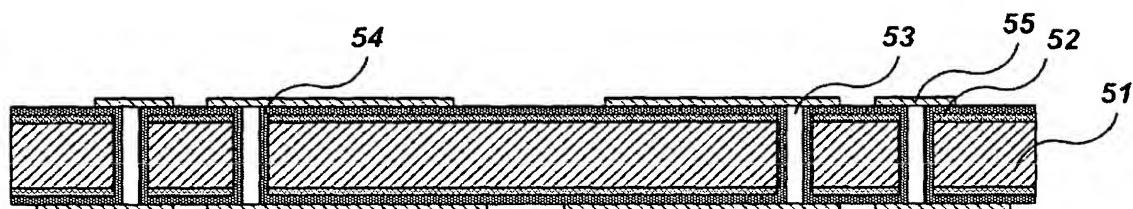


Fig. 8d

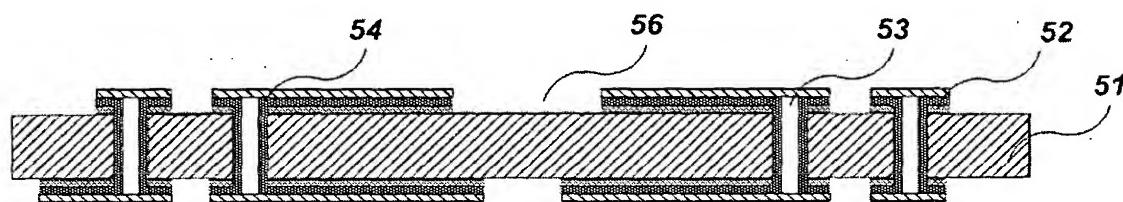
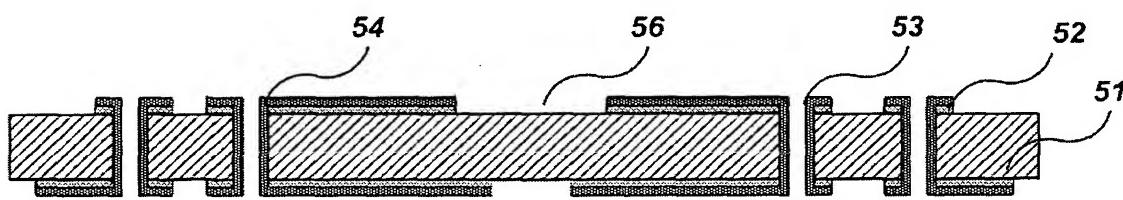


Fig. 8e



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Fig. 8f

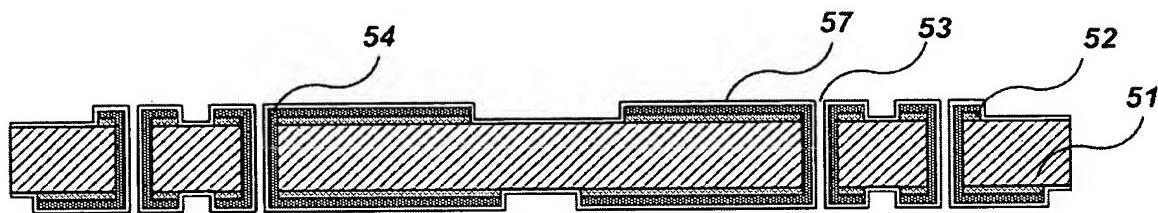


Fig. 8g

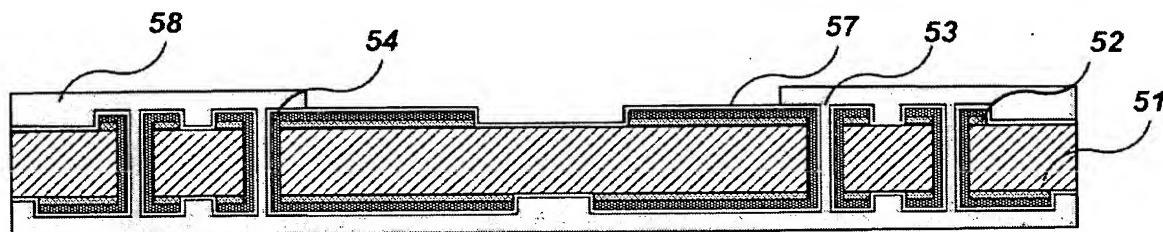
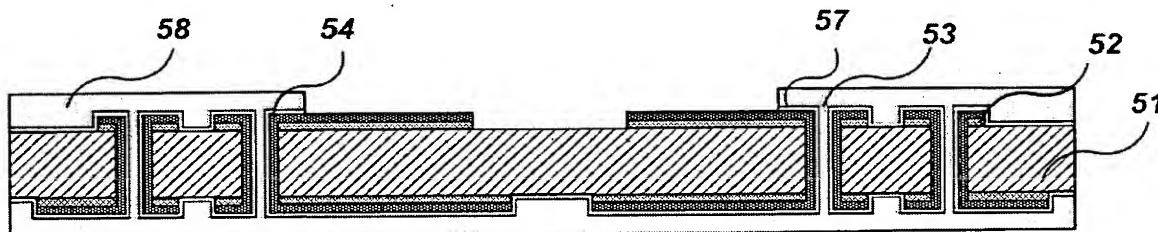


Fig. 8h



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Fig. 8i

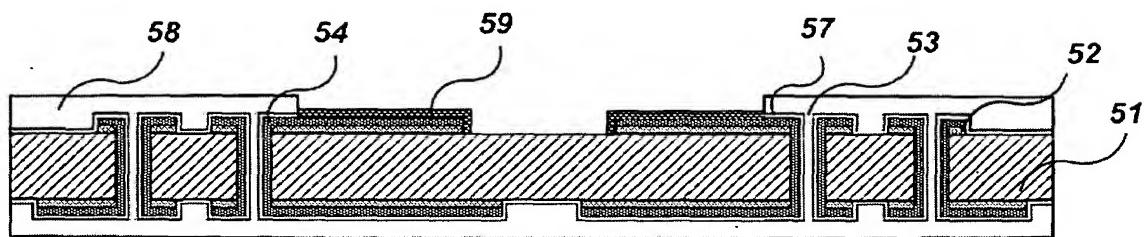


Fig. 8j

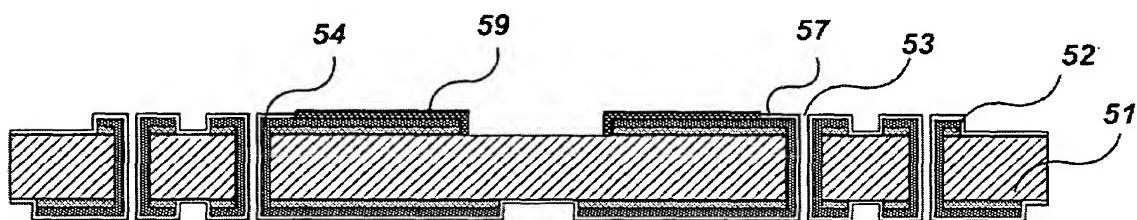
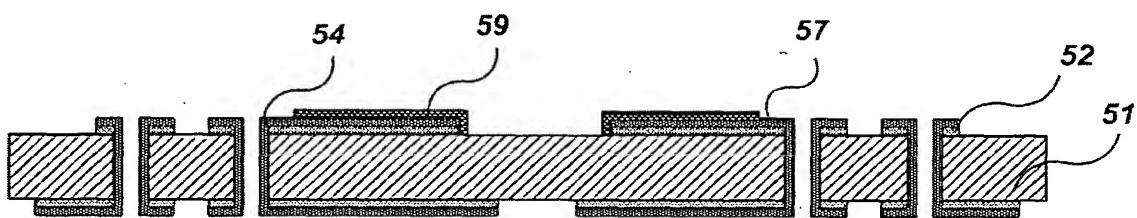


Fig. 8k



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Fig. 81

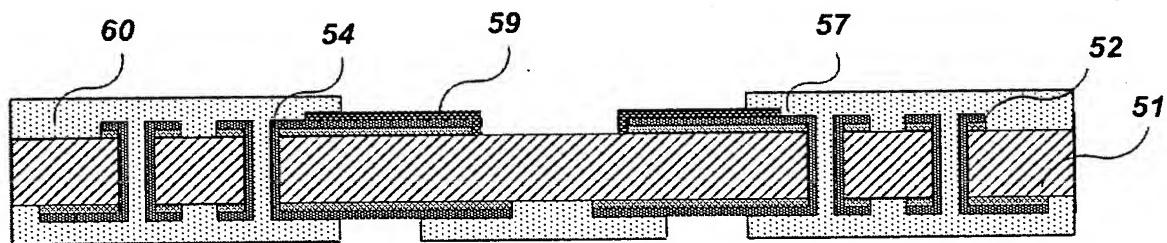
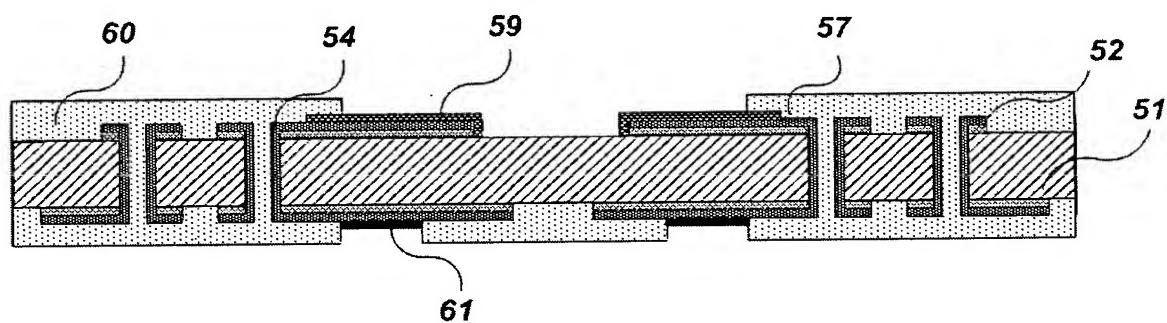
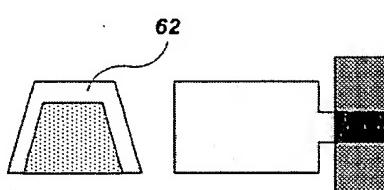
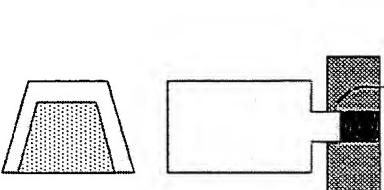
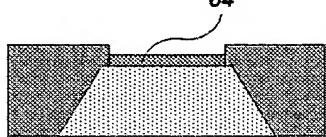
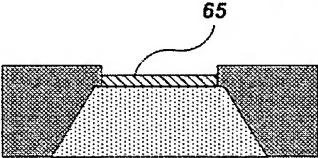
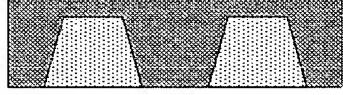


Fig. 8m



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Fig. 9

	With lead lines for use in electrolytic plating	Without lead lines for use in electrolytic plating
Bond finger		
Ball pad		
Trace		

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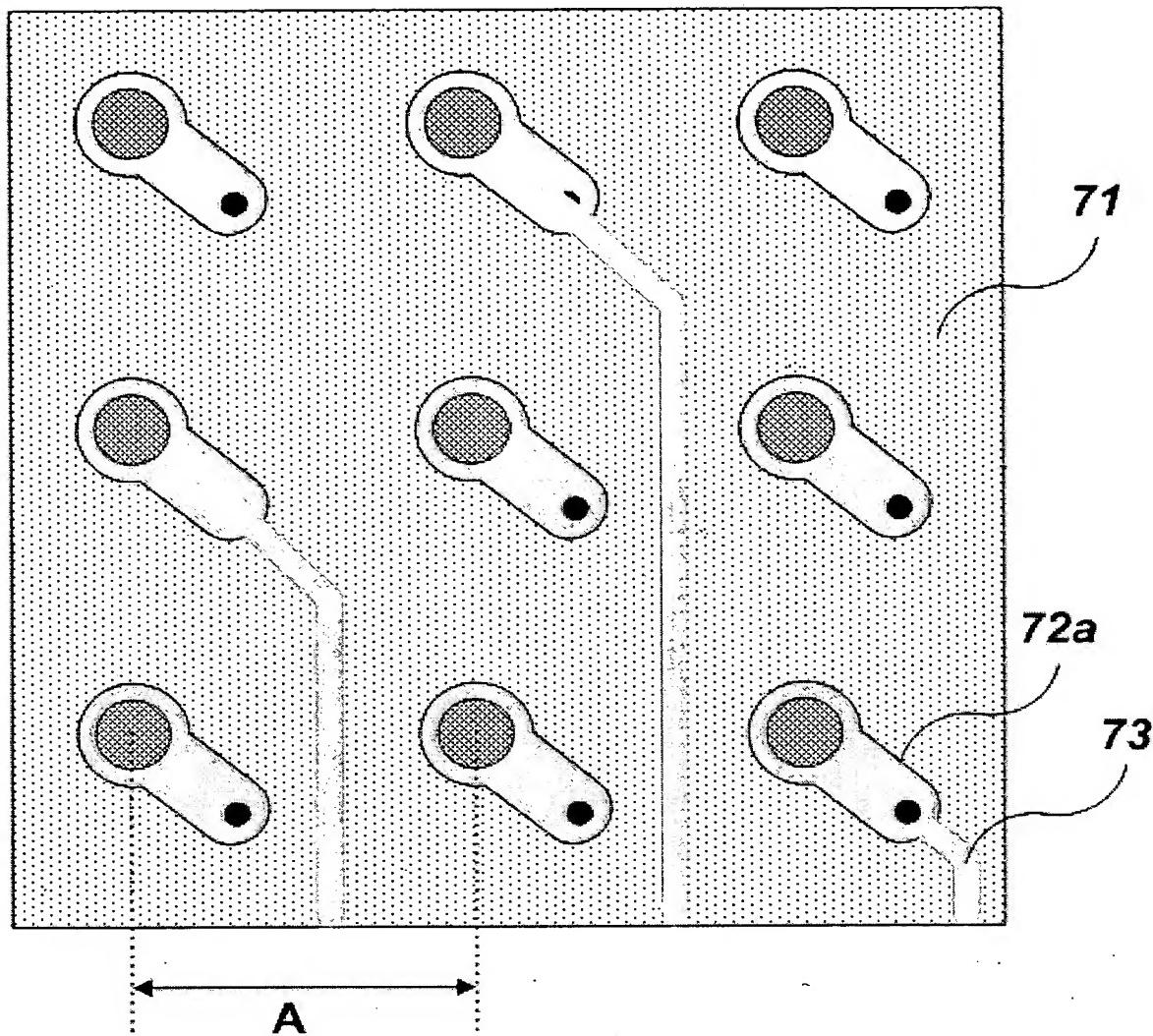
**Fig. 10**

Properties	With lead lines for use in electrolytic plating	Ball pad without lead lines -OSP	Ball pad without lead lines-electroless Au plating
Electrical performance	Low	High	High
Line density	Low	High	High
Reliability	Average	High	High
Productivity	High	Average	Average
Yield	High	High	High
Cost	Average	Average	Low
Lead Time	High	Low	Low

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**Fig. 11a**

**PRIOR ART**



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Fig. 11b

